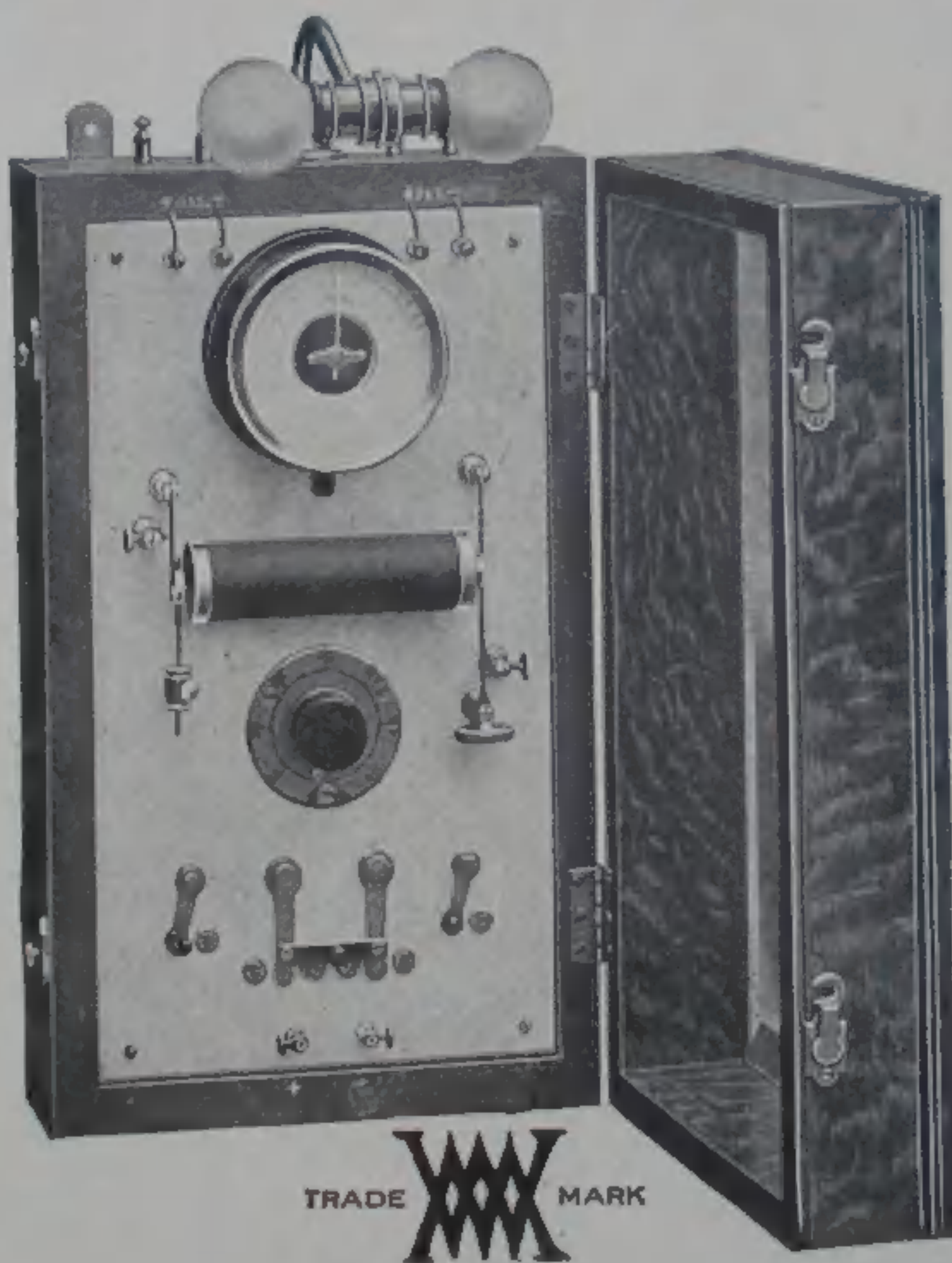


July 1910

ELECTRO- THERAPY

With the Meyer Galvanic and
Faradic Wall Plate No. 6



The Wm. Meyer Co.

Electrical Engineers
56 5th Ave. Chicago, U.S. A.

ELECTRO-THERAPY

With the Meyer Galvanic and Faradic Wall Plate No. 6

The wall plate shown herewith is the neatest and most compact ever designed. It contains means for obtaining those modalities which are ordinarily used in electro-therapy like the galvanic and faradic current in its several forms. The plate is white polished marble, bevel edged.

In the design of this wall plate, several departures were made from the conventional design which has been handed down from the early times. Many physicians desirous of equipping themselves with a wall plate, but who lacked room for the usual ponderous cabinet, are highly pleased with this compact apparatus.

The size of the bevel edged, polished marble plate is ten by eighteen inches. On the face of this are mounted the milliammeter which is of the Carpentier-Deprez type with movable system, by means of which the indicator can be accurately adjusted to zero. The meter is equipped with a shunt by means of which two readings are obtainable, one reading 20-0-20 by one-half milliamperes, on a red scale, while with the shunt plug inserted, a reading of 400-0-400 in five milliampere divisions are obtainable on the black scale.

Below the milliammeter, the faradic coil is mounted. The core is made of double annealed Norway iron wire, which insures a much more efficient faradic current, because of greater magnetic saturation and decrease of hysteresis. The primary and secondary winding has been so proportioned and adjusted to obtain a large volume of current. By reducing the resistance of the secondary a highly efficient faradic coil has been secured.

Of the two interrupters, one is a ribbon vibrator held at high tension by an adjustable nut and capable of giving sedative effects, the other vibrator is of the pendulum type and has an adjustable weight for regulating the number of interruptions. It should be noted that the primary current obtained from the faradic coil is a pulsatory uni-directional current which can be used as an interrupted galvanic current, especially with the slow or pendulum vibrator for exercising contractile tissue. The secondary current obtained with this slow interrupter, partakes also of the nature of an alternating or sinusoidal current.

Just as in galvano-therapy, current quantity is also the deciding factor in faradism and a coil which has many thousand feet of wire, but delivers no appreciable current, converting it, instead, into tension, will be useless as far as beneficent therapeutic results are concerned.

For regulating the voltage and intensity of the different currents, a shunt rheostat is provided, of the Galffe type, which admits of close and perfectly even regulation. It is wound to a high resistance with a wire the temperature coefficient is nil, and which does not deteriorate with repeated heating and cooling. The graduation of the resistance is more uniform and minute in this rheostat, than any other offered for a similar purpose. Diagnostic lamps, such as are used in urethroscopes, etc., can be controlled by it. The face of the dial is graduated in volts.

The rheostat is mounted on the back of the plate, the indicating dial graduated in volts, over which moves the indicator attached to the hard rubber knob, alone showing on the face of the plate.

There is but one switch for obtaining all the modalities, thus avoiding confusion which so often exists on wall plates. The other is for selecting the faradic coil interrupter. The simplicity of this arrangement over others, where from five to six unlabeled switches are placed before the operator can be appreciated. The busy practitioner has no time to look up instructions, and the apparatus should have such directive indications that he cannot fail to obtain all modalities. Below the switches are the binding posts for the patients' circuit. Diagnostic lamps are also attached to the same posts.

A very handsome nickel plated duplex lamp bracket surmounts the case. The one lamp is used to illuminate the apparatus, especially the milliammeter, while the other lamp is used for resistance.

The open case type (No. 5) is mounted in a quarter sawed golden oak polished frame, the back being closed by a metal frame to protect the wiring.

Price, complete with cords, handles and spongio discs\$30.00

The closed case type (No. 6) is mounted in a quarter sawed golden oak and polished cabinet, with beveled and polished plate glass door. It is the most compact and least bulky cabinet, strongly hinged and requires only one support at the top, though a bottom support is also furnished. This closed case is much to be preferred, because it keeps the apparatus free from dust and other injury to which apparatus continually exposed in the open atmosphere is subject.

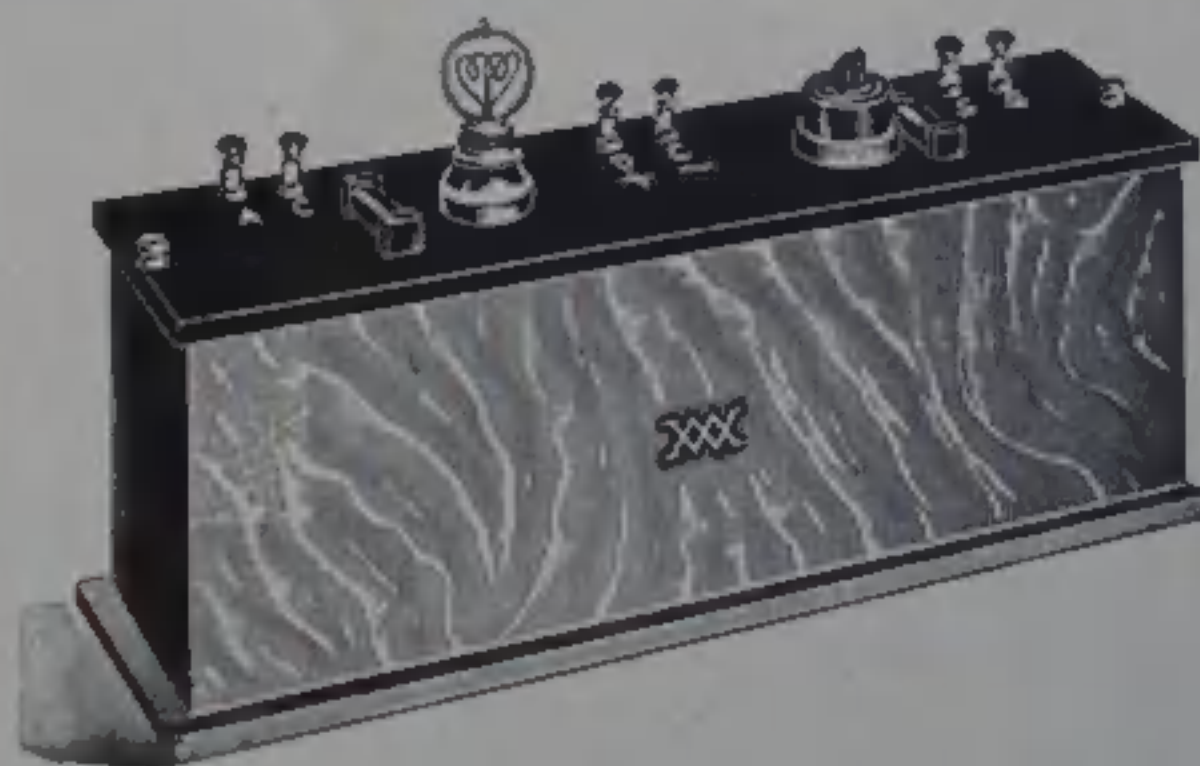
Price complete with cords, handles and spongio discs\$39.00

The Wall Plate can be operated from Batteries as well.

Price of 40—No. 7, wet cells\$12.00

Price of 40—dry cells 8.00

Rectifier



Where no direct current for operating the wall plate is available, the alternating current can be used quite as well, providing it is converted into a direct current by means of the rectifier shown here.

This rectifier not only changes the alternating into a unidirectional current, but has a fifth cell which absorbs all undulations and variations and acts as a high potential storage battery, delivering a smooth direct current. A separate circuit is provided for using the alternating as a sinusoidal current.

Price of five-cell rectifier, complete\$15.00

Price of sinusoidal switch 2.50

Special Rectifier circular on application.

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Directions for Operating the Meyer No. 5 Table or Wall Plate

The large six-button switch in the center of the plate is for selecting the various currents and is referred to in the directions as the "Current Selector."

The two-button switch to the left of the current selector is for operating either of the two vibrators with which the faradic coil is equipped and is called the "Faradic Switch", "S" for the slow vibrator at the left with the adjustable weight and "F" for the fast ribbon vibrator at the right.

The two button switch at the right of the selector is named interchanging switch. One button is stamped "110" and the other "B."

When the plate is ordered for use with battery of cells, this switch will be found placed upon B, and permanently secured in place with a screw. In connecting the cells with such plate, the terminals from the 40 Galvanic cells are to be connected with the left-hand posts P. and N. (Galvanic) and the terminals from the three Faradic cells are to be connected with the right-hand posts P. and N. (Faradic).

If the plate is intended to be used with the 110 volt direct current, the special switch will be found placed upon the button 110 and permanently secured in its place by a screw.

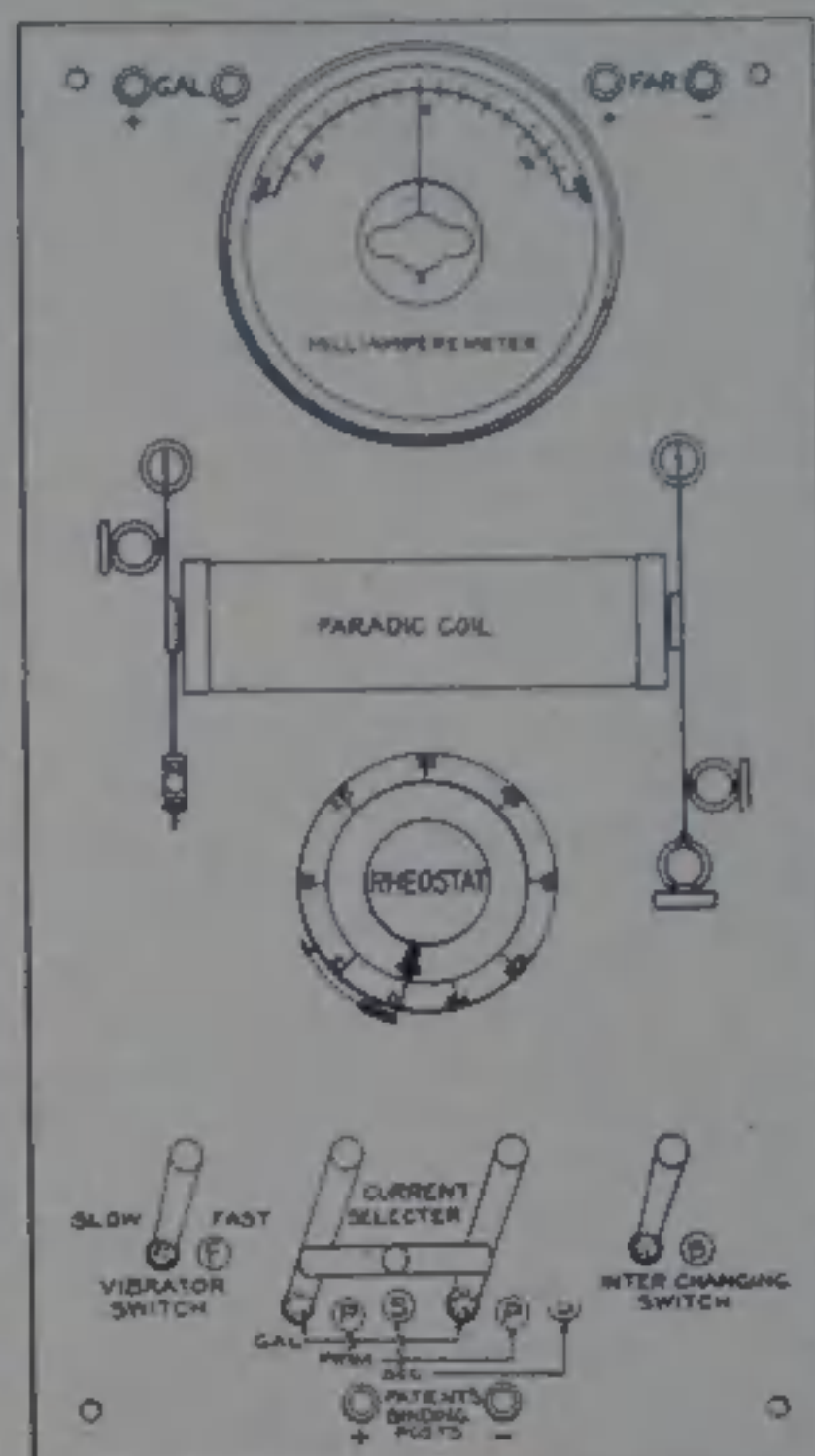
When connecting this plate with the 110 volt direct current, or a rectifier, care must be taken to ascertain which is the positive pole of the line, since this should always be attached to the positive galvanic post on top of the cabinet. The connecting plug furnished with the plate when ordered for 110 volt direct current has the metal contacts so arranged that after the polarity has been once established no mistake in attaching the detachable part correctly can be made. In testing a 110-volt circuit, it is best not to try this unless a lamp is in series to prevent blowing a fuse. It is better to make the connections and then test the current with a couple of wires at the "Patients' binding posts" by inserting the bare ends into a glass of slightly acidulated water and keeping them about one inch apart. Next turn the rheostat indicator over to about 35 and have the current selector on the buttons marked "G." The "negative" pole will be indicated by many fine bubbles rising from one of the wire ends immersed. Should this be the wire attached to the positive binding posts, then change the flexible cord connection to the "Galv." posts on top of the cabinet.

Always before attempting galvanic work, test the polarity of the patients' circuit.

THE MILLIAMPEREMETER

The meter is used to measure the Galvanic current only. It is always in circuit when the switch is on button "G" and will accurately register the amount of current passing through the patient.

The Meter is provided with two scales: one, in black figures, reading from 0 to 400 milliamperes, especially adapted to registering large currents; and the other, in red figures, reading 0 to 20 milliamperes, being more suitable for the registration of small currents.



The Meter is supplied with a brass plug with hard rubber top, and when the plug is in the meter, the reading is from the upper scale; figures in black, each subdivision being five milliamperes.

When the plug is out, the reading is from the lower scale, figures in red, each subdivision being one-half milliampere.

When using the meter to measure the current used for removal of superfluous hair or other light electrolytic work, **do not** leave the plug in the sockets, as the registration of the current in that case, being shown on the upper scale, would be almost imperceptible to the eye.

When using the meter to measure a large current, such as is used in the treatment of Fibroid Tumors, or other heavy work, **do not remove** the plug, as the lower scale has not sufficient range to register the flow of such current.

The dial should be adjusted by means of the small brass plug just above the shunt plug so that the needle will point to zero.

THE RHEOSTAT

It is a perfect current controller of wire resistance, constructed according to a unique method, assuring gradations of exact evenness; permitting the administration of very delicate currents or rather powerful dosages with absolute immunity from shock or unpleasant sensation. It is connected permanently in the Galvanic and Faradic circuits and is wired in shunt, insuring perfect safety in the employment of commercial currents; having a carrying capacity of one-half ampere it affords the operator the full range of the milliamperemeter scale, 400 milliamperes. The resistance is varied by means of a rotary arm which increases the current strength when moved in the direction taken by the hands of a clock; and decreases it by a reverse motion.

The face plate of the rheostat is graduated accurately in volts, and as the indicator knob or button is gradually turned to the right, the voltage increases.

Always return the rheostat indicator to zero when changing from Galvanic to Faradic, Primary or Secondary, and start every current modality with the indicator at zero, if you would avoid unpleasant shocks to your patients.

TO USE THE GALVANIC CURRENT

Place the current selector switch on button marked "G." In order to increase the Galvanic current, turn the rheostat indicator knob in the direction of the hands of a clock. To decrease the same current, turn in the opposite direction.

With the patient in circuit with the binding posts at the bottom and increasing the amount of current by means of the rheostat, the meter will at once register the amount of current in milliamperes that the patient is receiving and will read to the right or left side of the scale of meter, according to the polarity (or direction) of the current.

In using the Galvanic current, do not expect the meter to respond to the current even if the rheostat is turned on, unless the circuit is completed by placing the patient in connection with the patient's binding posts, or by connecting these two posts together by means of the conducting cord or wire.

TO USE THE FARADIC CURRENT

Place the current selector switch on button marked "P" (for primary or mild current) or "S" (for secondary or stronger current), when the current will at once be thrown onto either one of the vibrators by placing the faradic switch just in front of the coil on button marked "S" (slow) for the slowly vibrating rheotome, or on button marked "F" (fast) for the rapidly vibrating rheotome. The amount of interruptions received from the slowly vibrating rheotome are controlled entirely by the adjustment of the sliding weight backward or forward, and held securely in position by means of the set-screw. The slow, interrupted primary faradic current answers the purpose of exercising contractile tissue. The rate of interruptions received from the rapidly vibrating rheotome are controlled by means of the set-screws which regulate the tension of the spring. Both the primary and secondary faradic currents, before reaching the patient's binding posts, are controlled by means of the rheostat; increasing the strength of either one of these currents by operating the arm of the rheostat in the direction of the hands of a clock, or decreasing in the opposite direction, thereby giving the operator a much better and smoother control of these currents, than by the use of the old form of sliding shield, which would operate over the core of the coil.

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The Office Treatment of the Commoner Diseases of Women

By C. L. Suess, M. D., Lancaster, N. Y.

The diagnosis and non-surgical or conservative surgical treatment of the more prevalent chronic diseases of women is a large subject on which volumes may be written. By chronic diseases of women is meant, no doubt, what the laity term "female weakness," or "womb trouble." The diagnosis, as a rule, is very easy, but the treatment as taught in the medical colleges is usually unsatisfactory from the general practitioner's standpoint who wishes to relieve these sufferers by office treatment. The gynecologist who teaches this subject, teaches surgical gynecology and says but little about the non-surgical treatment of these conditions.

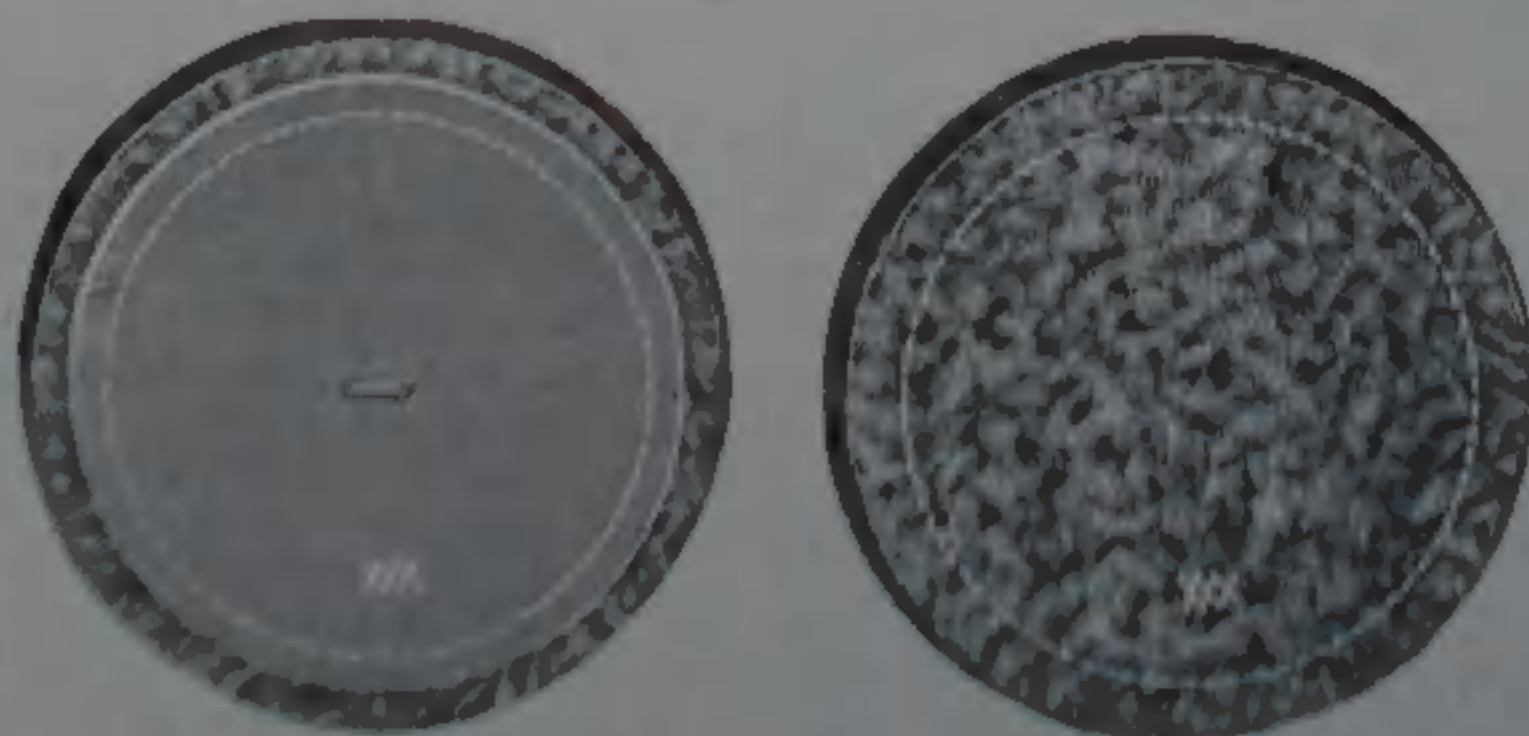
When the writer left college the routine office treatment was "ichthyol and glycerin tampons." Three years ago, while doing a little post-graduate work in New York, the treatment given at the various dispensaries was "ichthyol and glycerin tampons." In August of this year the writer spent a month at Chicago and again saw practically all women who presented themselves at the dispensaries treated with practically nothing but "ichthyol and glycerin tampons." These tampons do good. There is no doubt about that. Surgery does good. There is also no doubt about that. If a general practitioner treats all the chronic pelvic conditions that present themselves to him with only tampons, or on the other hand, operates upon them, he is not going to satisfy his patients and he will not increase his office income very materially.

The writer has spent much time and money in learning how he can best relieve the women who come to him with these troubles. The following routine is practiced with excellent results.

Dysmenorrhea.—There are many varieties mentioned. The diagnosis is usually made by the patient. This condition is merely a symptom of something wrong somewhere. Upon examination a small uterus with a pin-hole os is usually found. What is the best treatment? I used to dilate and curet, but the trouble would recur. Sponges are dangerous and don't cure. What will? Learn how to understand and use a galvanic and faradic battery and you can cure these patients in a few treatments. Expose the external os and insert a small uterine electrode attached to the cathode or negative pole. Place a pad connected



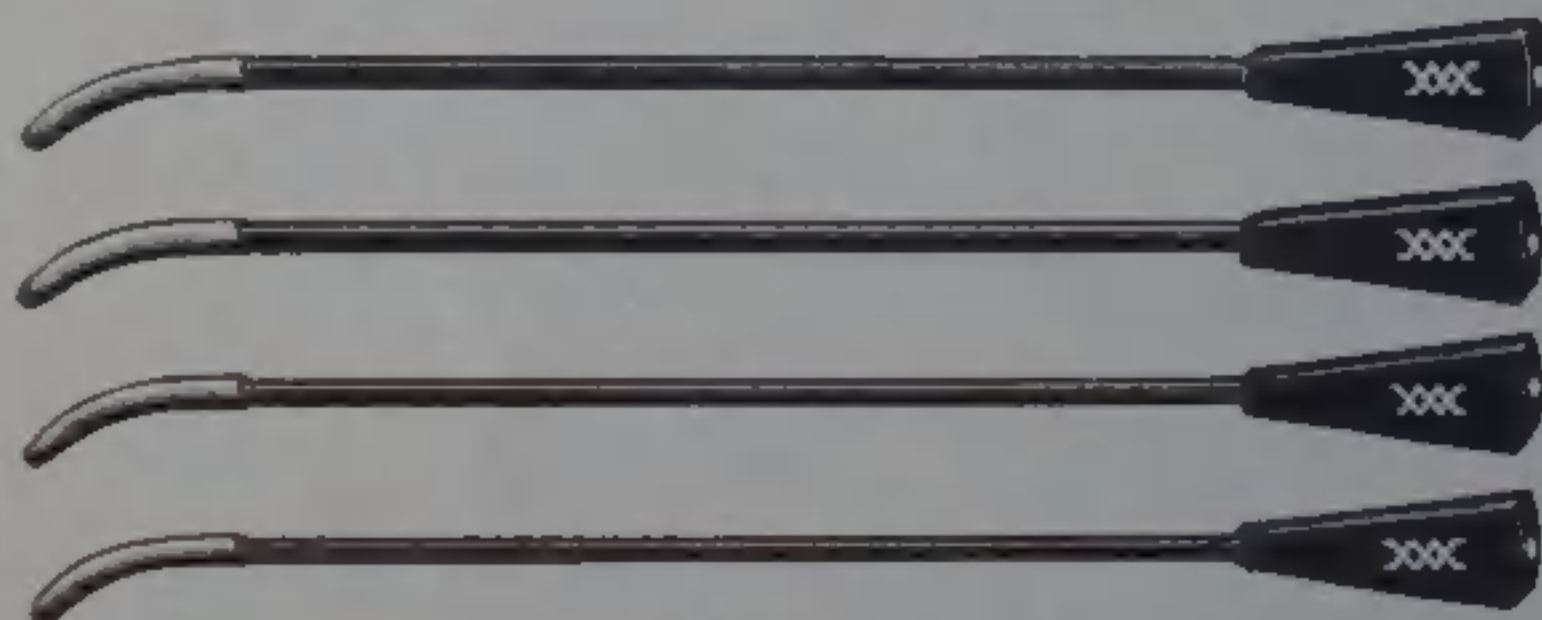
44. Goelet's Intra-Uterine Negative Dilating Electrode, nickel plated, set of three bulbs with one staff.....\$1.25; postage, 6c
Same as above in pure copper..... 1.50; postage, 8c
Same as above in zinc, for zinc-mercury amalgam cataphoresis..... 1.50; postage, 6c



7. Dr. P. B. Hayes Spongio-Pilline Abdominal Electrode.....\$1.25; postage, 16c

with the anode or positive pole upon the abdomen. Turn on from 30 to 40 milliamperes and gradually insert the electrode until it passes the internal os. Turn off the galvanic current and use the faradic current interrupted for 10 minutes. The negative pole causes the tissues to soften so that you readily dilate the os without pain to your patient. The faradic current massages the uterus and brings about a proliferation in the muscle tissue so that the uterus will really grow to a normal size. Repeat this treatment two or three times a week and when the next menstrual flow comes there will be no pain. Usually a few months treatment cures the patient. After the electrical treatment you can insert a tampon if you wish. Treat the woman generally. Advise about exercise, clothing, food. Look after the skin, kidneys and bowels. They don't need much medicine. I have never given bromides or opiates. Have the patient take a hot douche before she visits you at the office. This is merely for cleanliness.

Membranous Dysmenorrhea.—This condition is not as common as the above. The patient tells you she has "awful pains" each month and that she passes pieces of skin. How can you relieve her? Curetment does not cure. The membrane will form after each curetment. In this condition there is a hardening of the mucous membrane of the uterus. Three months ago the writer was called to treat a patient at the house. She was flowing very much and passed pieces that looked like leather. The writer made a diagnosis of abortion or miscarriage with retained placenta. What seemed strange at the time was that the os was practically closed. A curetment was done, when nothing was found but a cast of the uterus. It was apparently a mistake in diagnosis. At the next menstrual period the same pain was felt and similar tissue was passed. The writer was then convinced that he was dealing with a case of membranous dysmenorrhea, and after that treated her in the office with galvanism. The uterus was exposed and an intra-uterine electrode with a copper end was



45. Dr. Goldspohn's Copper Intra-Uterine
Electrodes, per set of four, sizes 12
to 20, French.....\$3.00; postage, 11c
Price, one only.....\$1.00; postage. 5c

inserted in the uterus. The negative current was applied three times a week, 30 to 50 milliamperes for ten minutes. At the next period the menses came without pain and without any signs of any membrane. The negative pole simply softens the hard membrane and puts the mucous membrane of the uterus in a healthy condition, so that no more membrane forms.

Amenorrhea.—The patient makes the diagnosis. Be sure the woman is not pregnant. If you have doubts, better give her a placebo and have her come again until you can satisfy yourself. Women will try to fool you and if you insert an intra-uterine electrode into a pregnant uterus you will bring on an abortion without fail. If the woman is not pregnant you usually find a small uterus. The pelvis is apparently in an anemic condition, due to vasomotor disturbances. By inserting the negative pole into the uterus and turning on from 30 to 50 milliamperes for five minutes, two or three times a week, the blood vessel will be dilated and the blood supply to the uterus will be increased. After having used the negative pole for five minutes, I usually turn off the galvanic current and use the faradic interrupted for five minutes. By the above treat-

ment you relieve the associated dysmenorrhea, amenorrhea and sterility. You dilate the uterus with the negative pole. The faradic makes the uterus grow to a normal healthy condition. You can give iron if you think it necessary. This condition is often found in fat women. For such persons it is well to be very strict about exercise, food, also to look after the kidneys and bowels.

Menorrhagia.—The diagnosis is made when the patient comes to you. Be sure the uterus is empty. You may be dealing with a case of partially retained placenta. Menor-



37. Goldspohn's Copper Ball Vaginal Electrode \$0.75; postage, 6c
 Goldspohn's Carbon Ball Vaginal Electrode 1.25; postage, 5c
 Zinc Ball Vaginal Electrode, for zinc-mercury amalgam cataphoresis..... 1.00; postage, 6c

rhagia calls for exactly the opposite treatment used in amenorrhea. The pelvic vessels, instead of being in a state of anemia, are engorged and relaxed. The uterus, instead of being small, is usually large and soft or in a state of subinvolution. For this condition I usually use a vaginal copper ball electrode. This is inserted into the vagina well up behind the uterus and connected with the positive pole. Have the electrode covered with wet absorbent cotton. The negative pole is connected with the abdominal pad. Turn on from 30 to 50 milliamperes for ten minutes. The astringent action of the positive pole causes the blood vessels and uterine muscles to shrink. After using the positive pole turn off the galvanic current and apply the faradic interrupted for purposes of massage. In this condition the ichthyol and glycerin tampon will do some good, and, as a rule, I insert one after the electrical treatment.

Sub-Involution.—Treat exactly the same as menorrhagia. The diagnosis can readily be made from a previous history of abortion or trouble following confinement. The uterus is large and soft.

Endometritis.—Diagnosis. Usually a discharge of what is termed leucorrhea. The well known mucus protrudes from the cervix. Insert the intra-uterine electrode with copper end into the cervix. Turn on the positive pole. Use anywhere from 30 to 50 milliamperes. The electrode will stick. When it sticks good and hard pull it out and the diseased mucous membrane will come away with it. In this way you remove the trouble much nicer than you could with a curet or by applying medicines.

Leucorrhea.—Usually associated with endometritis. If it is a vaginal discharge use the vaginal copper ball electrode attached to the positive pole. Have the electrode covered with wet absorbent cotton. Apply current about ten minutes. Very often there is an element of gonorrhea and then applications of silver nitrate anywhere from 10 to 40 grains to the ounce will cure the trouble.

Erosions of the Cervix.—Often called ulcers of the cervix. Use cup-shaped copper electrodes attached to positive pole.



28. Cup-shaped Electrode for Uterus, on insulated staff..... \$1.50; postage, 6c

Apply 30 to 50 milliamperes for ten minutes every second or third day.

Lacerated Cervix.—Of course you cannot expect to restore a lacerated cervix with electricity, but you can do the woman a whole lot of good and make her feel more comfortable. The hard citrical tissue can be softened by applying the negative pole to the cervix on every third or second day for a few weeks. After having softened the tissues all symptoms seem to vanish. However, if the woman don't object you can do an operation at her home later on.

Sterility.—Often associated with amenorrhea or displacements. If small uterus treat as for amenorrhea. If due to displacement relieve that condition.

Ovaritis.—Diagnosis. Woman complains of pain in the side. Usually at time of menses. Palpation shows a large and tender ovary. Treat with vaginal copper ball electrode. Cover with wet absorbent cotton. Place electrode against ovary and turn on positive side 30 to 50 milliamperes for ten minutes. Ichthyol and glycerin tampon might be used after electrical treatment.

Salpingitis.—Diagnosis. May be history of gonorrhea. Palpation shows large and tender tube. Treat by applying electrode against tube same as is done in ovaritis. The copper from the electrode is carried into the tube by cataphoresis. By persistent treatment with the copper positive pole this condition may be entirely relieved. No harm is done by the treatment and if necessary the appendages can be removed surgically later on if the office treatment doesn't give results.

Displacements, Versions and Flexions, without Adhesions.—Diagnosis. Have bladder empty. The uterus is movable, but fundus is found either forward or back. Usually associated with sub-involution and lack of tone in uterus. There may be infantile uterus and dysmenorrhea. If the latter treat as for dysmenorrhea. If there is sub-involution replace the uterus as far as possible. Insert copper stem intra-uterine electrode. Turn on positive pole. Apply five minutes and turn on interrupted faradic for five minutes. The astringent action of the positive pole will overcome the sub-involution and the stimulating action of the faradic current will put the uterus in condition. Pessaries may be used if indicated. Knee-chest position may help you in replacing uterus.

Displacements with Adhesions.—First get rid of the sub-involution by using positive pole. Next put uterus in good condition by use of interrupted faradic current. After you have attained that much, use copper ball vaginal electrode against adhesions. Turn on the negative current, which will soften and break up adhesions. After having broken up the adhesions you might use the interrupted faradic current again to keep uterus in place. Use pessaries if indicated.

Procedentia or Prolapse.—Diagnosis usually made by patient. Uterus is found prolapsed. Treatment. Replace uterus first. Use copper-shaped electrode. Apply positive pole to overcome sub-involution. Use faradic to tone up uterus. Use ichthyol and glycerin tampon or pessary if indicated.

Pruritus Vulvae.—Usually due to leucorrhea, or endometritis. Treatment. Relieve the conditions as mentioned above.

Cystitis.—Usually due to associated pelvic condition. Find out what the trouble is and remove that.

Constipation.—Instruct patient in regard to diet. One diet will not relieve all. Stewed prunes for breakfast are good. Have them drink water between meals. I have had good results with the induced static current, which massages the entire alimentary tract. Insert a copper electrode into rectum and separate prime conductors till the patient says it is strong enough. If you have no static machine you

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61. Copper Rectal Electrode, for Hemorrhoids\$1.00; postage, 5c

might use the interrupted faradic over abdomen. If you have a vibrator use that over the abdomen. Flushing the colon will help, but few practitioners and patients care to practice that procedure.

Fibroids.—Diagnosis. History of menorrhagia and metrorrhagia. If there is a polyp it may be seen or felt at external os. Twist off and cauterize pedicle. Treat associated condition of congestion with positive pole and faradism. If there is a tumor in the body of the uterus symptoms may be obscure and diagnosis difficult. If you are certain that you have a fibroid use the copper ball vaginal electrode covered with wet absorbent cotton. Use positive pole for its astringent action. Instead of wetting absorbent cotton with water you might use a solution of supra-renal extract, which will be carried into the tumor and uterus by cataphoresis. With this treatment you limit the blood supply to the tumor, and if you cannot do a whole lot, you can arrest the growth very materially.

Clitoris.—Adherent prepuce. Apply cocaine on absorbent cotton or carry it in with positive pole by cataphoresis. Break up the adhesions, or, if necessary, cut out a "V" shaped piece so as to expose the clitoris.

Carcinoma.—Diagnose early if possible. If a woman comes to you at the time she should be having the menopause with a history of menorrhea or metrorrhagia, examine her very carefully. Get some uterine or cervical scrapings and examine them under the microscope. If you are in doubt, send her to someone who is more qualified than you are to make a proper diagnosis. Treatment lies between the use of x-ray and hysterectomy. I think the best treatment is hysterectomy first, and then use of the x-ray to prevent recurrence.

The above, in a brief way, has been the routine the writer has followed in his office in the treatment of the more prevalent chronic diseases of women. The treatments mentioned have given better results and brought in more money than any other treatments that the writer has used. The writer is not an enthusiast on electricity. He does not use it on every patient that comes to his office. Electricity is a very good agent if properly understood and used in conjunction with other lines of medicinal and hygienic treatment. Electricity in the more prevalent chronic diseases of women gives results. It is easy to understand the galvanic current. The positive pole is astringent and acts as a sedative. The negative pole relaxes and is an irritant. An investment of \$50.00 for a galvanic and faradic wall plate and a knowledge of how to use it will make office practice for any doctor. Later on static electricity and vibration can be added, but the writer gets more results from his wall plate than he does from his static machine and vibrator combined.

Price of electrodes for the above work complete ..\$8.00

Preserve this if interested. We shall add to this form of treatment from time to time additional leaflets which will finally make a complete work on Electro-Therapy.